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A.D. 1854 . . . . N° 1287.

SPECIFICATION

OF

FRANCIS PULS.

ELECTRO-GALVANIC APPARATUS FOR MEDICAL PURPOSES.

LONDON:
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A.D. 1854 . . . . . N° 1287.

Electro-Galvanic Apparatus for Medical Purposes.

(*This Invention received Provisional Protection, but notice to proceed with the application for Letters Patent was not given within the time prescribed by the Act.*)

PROVISIONAL SPECIFICATION left by Francis Puls at the Office of the Commissioners of Patents, with his Petition, on the 10th June 1854.

I, Francis Puls, of Whitechapel Road, Philosophical Instrument Maker, do hereby declare the nature of the said Invention for "Improvements in Electro-Galvanic Apparatus for Medical Purposes, Parts of which Improvements are also applicable to other Electro-Galvanic Apparatus," to be as follows, that is to say:—

My said improvements have especial reference to the construction of a pocket electro-galvanic apparatus for medical purposes, by which a more powerful and beneficial action on the human body may be obtained than from any hitherto in use. My said apparatus is comprised in an oblong box of convenient size, divided into two longitudinal compartments, one of which contains the battery, in a tray of gutta percha, or other suitable insulating material; & the other, which is divided breadthways, the conductors & the apparatus for the induced current. The battery is constructed of plates of any metals at present in use for the purpose, but so arranged that each plate, whether of negative or positive metal, shall be rigidly connected with the next plate but two before (or after it, in the battery, or with the next plate but one of the opposite quality to itself,) by an extension of either of the plates along the side of the battery to meet the other plate, the only exception being with the second plate from one end of the pile, which is detached. And in the apparatus for the induced current, I cause a piece of hard steel to be soldered over one end of the electric wire, which is wound over a bunch of soft iron wire, or a thin rolled iron plate, & at the end of the said hard steel I place a small plate of platina, flat or rounded; and I place, in connection with the said plate, a platina or platinised spring, which I connect with one pole of the galvanic battery. The piece of hard steel is adjustable, & by being pressed more or less against the spring, will increase or decrease the intensity of the shocks, at the operator's pleasure. To the spring is attached a piece of metal suspended by the centre, upon the lower end of which is fastened a small plate of soft iron, by means of which the contact is broken. I employ at the place of interruption no points, but flat or rounded plates, which prove less liable to oxidation by the electric spark, & cause it to spread further. This arrangement also produces a more agreeable sensation than when the electricity springs from a point to a plate, or the reverse, at the place of interruption. The parts of the above improvements which refer to the arrangement of the plates in the battery, & the flat or rounded plates employed at the place where contact is broken, are applicable to other electro-galvanic apparatus than those used for medical purposes, in order to give greater intensity to the action & to obviate oxidation.

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Printers to the Queen's most Excellent Majesty. 1854.